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10/642,309

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Mark Justin Moore

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THOMAS, KAYDEN, HORSTEMEYER & RISLEY, LLP  
600 GALLERIA PARKWAY, S.E.  
STE 1500  
ATLANTA, GA 30339-5994

EXAMINER

WU, QING YUAN

ART UNIT

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/642,309	<b>Applicant(s)</b> MOORE, MARK JUSTIN	
	<b>Examiner</b> Qing-Yuan Wu	<b>Art Unit</b> 2194	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 March 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7-22 and 24-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-22 and 24-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 May 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. This Office Action is in response to communications received March 11, 2008. Claims 1-5, 7-22 and 24-34 are pending.

#### ***Continued Examination Under 37 CFR 1.114***

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/11/08 has been entered.

#### ***Oath/Declaration***

3. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

It does not state that the person making the oath or declaration believes the named inventor or inventors to be the original and first inventor or inventors of the subject matter which is claimed and for which a patent is sought.

#### ***Drawings***

4. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because the current drawings are not clear (see 37 CFR 1.83(a)). Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent

and Trademark Office no longer prepare new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

***Claim Objections***

5. Claims 5 and 22 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-5, 7-12, 16-22, 24-29, 33 and 34 are rejected under 35 U.S.C. 102(b) as being anticipated by Silberschatz (see PTO-892 mailed 02 July 2007).

8. As to claim 1, Silberschatz teaches a method for managing shared resources in a computer system, comprising:

establishing and registering a plurality of objects in response to requests from hardware or software associated with the computer system (§22.8.1; p. 753 ¶1);

the objects including at least one type, at least one attribute, and a handle (§22.3.2 ¶2; §22.4.1 ¶1; §22.8.1);

establishing a plurality of message pool objects, wherein the plurality of message pool objects comprise pools of free messages that can be allocated (§4.5.2.2 ¶1; §4.5.4); and

manipulating the plurality of objects to effect processing and exchange of information (§18.2 ¶1 – 2);

receiving, at a message pool interface, a request by a first task object interface for a message allocation;

allocating a message from the free message pool to the first task object;

sending the message from the first task object interface to a second task object interface;

performing processing by the second task object in response the message receipt;

returning to the first task object interface upon completion of processing (when the mailbox/message pool object is owned by a process, such as the first process P1,

return/reply messages to the mailbox is a return to the first process as well, §4.5.2.2; §4.5.4); and

returning the message to the message pool interface upon completion of processing (§4.5.2.2; §4.5.4).

9. As to claim 2, Silberschatz teaches:

establishing a plurality of task objects (§22.3.2 ¶2 – 5);

allocating messages from at least one free message pool object in response to requests from one or more task objects, wherein the messages include blocks of information that can be passed to other task objects (§4.5.2.2 ¶1; §4.5.4);

exchanging the messages between the plurality of task objects, thereby effecting requests for processing (§4.5.2.2 ¶1; §4.5.4); and

returning the messages to the free message pool object upon completion of processing (§4.5.2.2 ¶1; §4.5.4).

10. As to claim 3, Silberschatz teaches:

the plurality of task objects include at least a task type and an interface type, the interface type enabling request and release of messages (p. 111 ¶1 – 2); and

the plurality of message pool objects include at least a pool type and an interface type (§4.5.2.2 ¶1; p. 111 ¶1 – 2).

11. As to claim 4, Silberschatz teaches exchanging the messages between the plurality of task objects, thereby effecting requests for processing further comprises at least one of: putting a message to an interface, getting a message from an interface, and waiting for a message to arrive on an interface (§4.5.3).

12. As to claim 5, Silberschatz teaches: receiving, at a message pool interface, a request by a first task object interface for a message allocation; allocating a message from the free message pool to the first task object; sending the message from the first task object interface to a second

task object interface; performing processing by the second task object in response the message receipt; and returning the message to the message pool interface upon completion of processing (§4.5.2.2 ¶1; §4.5.4).

13. As to claim 7, see the rejection of claim 5 for explanation regarding limitations not specifically addressed in this rejection. Silberschatz teaches sending an arm interrupt message from the first task object interface to a interrupt object interface; disabling an interrupt with the arm interrupt message by the interrupt object; and returning the message to the first task object interface (§4.5.4; p. 407 ¶1 – 2; p. 409 ¶3 – 4).

14. As to claim 8, Silberschatz teaches: defining a plurality of top-level tasks from the plurality of objects; providing each of the plurality of top-level tasks with a private memory resource; enabling access of the private memory resource to any subtask created by a top-level task (§4.3.1 ¶1 – 2).

15. As to claim 9, Silberschatz teaches: allocating a memory space to a parent task; establishing at least one subtask to the parent task; enabling access of the memory space to the at least one subtask; and preventing access of the memory space to tasks not associated with the parent task (§4.3.1 ¶1 – 2; p. 37 ¶1).

16. As to claim 10, Silberschatz teaches: allocating a memory space to a subtask; and preventing access of the memory space to a parent task of the subtask (§4.3.1 ¶1 – 2; p. 37 ¶1).

17. As to claim 11, Silberschatz teaches: establishing an object instance for each of the plurality of objects; and establishing an object handle for each object instance, the object handle referencing a data structure used to implement the object instance (§22.3.2 ¶2; §22.4.1).

18. As to claim 12, Silberschatz teaches the object handle is a pointer value (§22.4.1 ¶1).

19. As to claim 16, Silberschatz teaches:

organizing the plurality of objects as files in a global file system, wherein files in the system contain references to objects in memory (§11.1.2 ¶1; Fig. 11.2; §18.2); and

referencing each of the plurality of objects in relation to a plurality of top level object types (§11.3.3; §4.3.1 ¶1).

20. As to claim 17, Silberschatz teaches the plurality of top level object types include tasks, interfaces, pools, mutexes, semaphores, interrupts, and memory (§18.2; §22.3.2 ¶2 – 5).

21. As to claims 18-22, 24-29, 33 and 34, see the rejection of claims 1-5, 7-12, 16 and 17 above.

***Claim Rejections - 35 USC § 103***

22. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:



(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

23. Claims 13-15 and 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Silberschatz as applied to claims 1, 11, 18 and 28 above, in view of Jaworski (see PTO-892 mailed 02 July 2007).

24. As to claims 13 and 30, Silberschatz fails to specifically teach derived object types as claimed. However, Silberschatz combined with Jaworski teaches: establishing at least one derived object type, based upon the object instance; establishing object attributes for the at least one derived object type; and accessing any established object attributes with the object handle (Silberschatz: §22.3.2 ¶2; §22.4.1 ¶1; Jaworski: p. 91 ¶7). It would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to combine these teachings because both teach Java and programming techniques.

25. As to claims 15 and 32, see the rejection of claims 11, 13, 28 and 30.

26. As to claims 14 and 31, Jaworski teaches appending data structures associated with the at least one derived object type to the data structure used to implement the object instance (p. 94 ¶3).

***Response to Arguments***

27. Applicant's arguments filed March 11, 2008 have been fully considered but they are not persuasive.

28. Regarding the oath/declaration, the oath/declaration received 18 August 2004 states that the person making the oath or declaration believes the named inventor to be the *sole* inventor, but does not state *first* inventor. It is noted that the applicant attempts to re-interpret rule 37 CFR 1.63(a)(4) in the remark, however, since the rule is clearly requiring “the person making the oath or declaration believes the named inventor or inventors to be the original and first” and not “original or first” as interpreted by the applicant, the objection is maintained. See MPEP §§ 602(IV), 35 USC 115 and 37 CFR 1.63(a)(4).

29. Examiner acknowledges Applicant's comments regarding the drawings and reminds Applicant of the outstanding objection to the drawings.

30. Regarding the claim rejections, applicant argue that Silberschatz fails to disclose, teach, or suggest a) “returning the message to the first task object interface upon completion of processing...[and] returning the message from the first task object interface to the message pool interface” and that b) using a message queue as an intermediate storage is different than the limitation recited in point a). Examiner respectfully disagrees. As to point a), upon further examining the teaching of Silberschatz, the examiner submits that Silberschatz clearly teaches "returning to the first task object interface upon completion of processing and returning the message to the message pool interface upon completion of processing". More specifically,

Silberschatz teaches in a shared mailbox/message pool object environment, return/reply messages are sent to the mailbox, however, when the mailbox/message pool object is owned by a process, such as the first process P1, the return/reply messages to the mailbox is also a return to the first process (§4.5.2.2; §4.5.4). As to point b), examiner respectfully disagrees and submits that Silberschatz's teaching of a mailbox object (§4.5.2.2, ¶1) clearly satisfied the limitation of a message pool object comprises pools of free messages as recited in the claim, in addition applicant failed to explain why the mappings of the examiner fails to satisfy the claim limitation as recited, therefore, applicant's argument is not persuasive.

31. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Qing-Yuan Wu whose telephone number is (571)272-3776. The examiner can normally be reached on 8:30am-6:00pm Monday-Thursday and alternate Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

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like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Qing-Yuan Wu/  
Examiner, Art Unit 2194

/Meng-Ai An/  
Supervisory Patent Examiner, Art Unit 2195